Kentucky Epidemiologic Notes & Reports

Cabinet for Health and Family Services
Department for Public Health
Division of Epidemiology and Health Planning

Volume 41 Number 12 December 2006

January is Cervical Cancer Awareness Month

Screenings and HPV vaccine beneficial to cervical cancer prevention

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Designated by U.S. Congress as Cervical Cancer Awareness Month, January is an ideal time for healthcare providers to emphasize issues related to cervical cancer, human papillomavirus (HPV) disease, and the importance of early detection with their patients.

In 2006, cervical cancer is expected to strike more than 10,000 women in the U.S. and nearly 3,700 women will die from this disease. In 2003, Kentucky had the twelfth highest cervical cancer incidence rate in the U.S., with 8.8 cases per 100,000 females (all ages). In Kentucky, African American women have twice the rate of cervical cancer as Caucasians (16.9 vs. 8.1 per 100,000), while the Appalachian rate is 14.0 per 100,000. From 2002 to 2003, the incidence of invasive cervical cancer decreased a total of 14%.

Of total cervical cancer deaths in the U.S., 22.9% occur in women under 45 years of age, while 45.3% of deaths due to cervical cancer occur in women younger than 55 years of age. Cervical cancer is the second leading cause of cancer deaths in women ages 20- 39 years old in the U.S., with breast cancer being first. The number of cervical cancer deaths in Kentucky began decreasing for the time period 1999–2002, only to rise 63% to 88 deaths in 2003 from 54 deaths in 2002. In 2003, Kentucky had the second highest cervical cancer mortality rate in the nation after West Virginia, with 3.9 deaths per 100,000 females (all ages). This compares to the 2003 average cervical cancer death rate in the U.S. of 2.5 deaths per 100,000 females (all ages).

The majority of cervical cancer cases (99.7%) are caused by HPV, a common sexually transmitted virus with more than 100 different strains. High risk genital HPV accounts for more than 35 types of the virus. Most HPV infections are asymptomatic, and most infections will resolve on their own. HPV can also cause other types of abnormal and precancerous lesions of the cervix, vagina, and vulva. The virus can also cause genital warts and warts in the upper respiratory tract.

As of 2005, almost 20 million Americans had contracted genital HPV, and more than six million new cases of genital HPV are annually diagnosed in the U.S. According to the Centers for Disease Control and Prevention (CDC), more than 50% of sexually active men and women are infected with HPV sometime in their lives. HPV infection is usually acquired soon after sexual activity begins, with a cumulative incidence of about 40% within 16 months. The peak incidence of HPV infection in the U.S. in 2000 was 15-24 years of age, while the U.S. peak incidence of cervical cancer for the period 1998-2002 was 35-44 years of age.

Routine periodic screening encourages early identification of precancerous conditions of the cervix and early stage diagnosis of cervical cancer. Most cervical cancers can be prevented with detection

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and early treatment of precancerous lesions. When pre-invasive lesions are treated, five year survival rates are close to 100%. Pap test screenings are credited with decreasing cervical cancer mortality by 70% over the last five decades. Approximately half of all cervical cancer cases occur in women who have never been screened, and an additional 10% of cases occur in women who have not been screened in the last five years. In 2006, 81,343 women received Pap tests through Kentucky local health department programs. In addition to regular Pap test screenings, other risk reduction interventions include abnormal Pap test follow-ups as recommended by a healthcare provider, limiting the number of sexual partners, and tobacco cessation.

The Advisory Committee on Immunization Practices (ACIP) recently voted to recommend that an HPV vaccine be routinely given to 11-12 year old girls. According to the ACIP's recommendation, three doses of the new vaccine should be routinely administered to girls when they are 11 or 12 years of age. However, the committee noted that the vaccination series can be started as early as nine years of age at the discretion of the healthcare provider. The recommendation also includes girls and women 13-26 years old because they will benefit from receiving the vaccine. The vaccine should be administered before onset of sexual activity (before women are exposed to the viruses), but females who are sexually active should still be vaccinated. Females who have not been infected with any vaccine-specific HPV type would receive full benefit of vaccination. Females who already have been infected with one or more HPV type would still receive protection from the vaccine types they have not yet acquired.

Gardasil®, manufactured by Merck, is the first vaccine developed to prevent cervical cancer, precancerous genital lesions, and genital warts due to HPV. The vaccine is highly effective against four types of the HPV viruses, including two that cause approximately 70 percent of cervical cancer cases. The duration of vaccine protection is unclear; however, current studies (with a five-year follow-up) indicate that the vaccine is effective for at least five years. There is no evidence of waning immunity during that period of time.

Gardasil® should be delivered through a series of three intramuscular injections over a six month period. The second and third doses should be given at two and six months after the first dose. The vaccine can be administered at the same visit as other age-appropriate vaccines.

The HPV vaccine can be given to females who have an equivocal or abnormal Pap test, a positive Hybrid Capture II® high risk test or genital warts. Women should be advised that data do not indicate that the vaccine will have any therapeutic effect on existing Pap test abnormalities, HPV infection or genital warts. The HPV vaccine is not recommended for use during pregnancy. Should a female become pregnant during the vaccination series, vaccination should be delayed until after delivery, at which time the series can be completed. The HPV vaccine is contraindicated for persons with a history of immediate hypersensitivity to yeast or to any vaccine component Immunocompromised females, either from disease or medication, can receive this vaccine; however, the immune response and efficacy might be less than expected. Vaccination of individuals with moderate or severe acute illnesses should be deferred until after the illness improves. Cervical cancer screening recommendations such as Pap tests have not changed for females who receive the HPV vaccine

The federal Vaccines for Children (VFC) Program will provide free vaccines to children and adolescents who meet eligibility criteria. HPV vaccine has been added to the CDC/Pediatric Vaccine Contract and vaccine should be arriving at the Department for Public Health's central distributor depot sometime in December, 2006.

For further information on cervical cancer screening, contact the Kentucky's Women's Cancer Screening Program at (502) 564-2154 or toll-free 1-800-4-CANCER. Information is also available at www.chfs.ky.gov/dph/ach/mch/cancerscreening.htm.

Pertussis Update

Vaccination is Best Prevention for Whooping Cough

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Pertussis is an infectious disease of the respiratory tract commonly known as whooping cough. Typically this disease manifests in children with paroxymal spasms of severe coughing, whooping, and posttussive vomiting. Pertussis is caused by bacteria that is found in the mouth, nose, and throat of an infected person and is spread through close contact when an infected person talks, sneezes or coughs.

Pertussis is a reportable disease in Kentucky. Physicians and other healthcare providers should use culture isolation of *Bordetella pertussis* from a clinical specimen or a positive polymerase chain reaction (PCR) for both the diagnosis of pertussis and for reporting to the local public health department. Medical providers should not order antibody or serologic tests for the diagnosis of pertussis, as those tests are not well standardized. Serologic test results for pertussis also cannot be used by Kentucky public health officials as laboratory criteria for disease confirmation and reporting to the Centers for Disease Control and Prevention (CDC).

The most common major complication that can result from pertussis is hypoxia, apnea, pneumonia, seizures, encephalopathy, and malnutrition. Most deaths occur among unvaccinated children or children too young to be vaccinated.

Pertussis is most contagious during the early stages of infection, typically before the severe coughing spells begin. Adults and older children may have a milder form of the disease, often mistaken as a common cold, and can easily spread to others who are unprotected. Adults and older children may act as a reservoir for the disease and pass it to infants and young children. The majority of pertussis cases in the past decade occurred among children, and more than half of pertussis cases now occur in adolescents and adults. The increase in adolescent cases may be due to improved recognition and reporting, waning immunity, and an increase in circulating bacteria. Pertussis is responsible for as many as 25% of all severe cough illnesses lasting seven days or longer among adolescents and adults. Most persons beyond early childhood are ill for several weeks and have seen their doctor multiple times before being diagnosed with pertussis.

Attack rates of pertussis are as high as 80-90% among nonimmune household contacts. Adolescents and adults with pertussis can transmit the disease to infants. According to the disease surveillance information collected for a five-year period from 2001 to 2005, Kentucky had a total of 507 cases of confirmed or epi-linked cases of pertussis. The largest number of cases reported occurred in 2005 with a total of 157 cases. The initiation of the Kentucky Electronic Disease Surveillance Reporting System has improved the accuracy and timeliness of reporting pertussis cases to the State Vaccine Preventable Disease Coordinator and has helped to assist the Division of Epidemiology and Health Planning in determining if an outbreak is occurring.

A major goal of the Kentucky Immunization/ Vaccine Preventable Disease Program is to reduce the incidence of pertussis cases 15% by year 2010. Based on 2004 data, the current incidence rate in Kentucky for pertussis is 1.4 cases per 100,000.

The best prevention against pertussis is vaccination for children, adolescents, and adults. The vaccine to protect children against whooping cough is the diphtheria, tetanus, and acelluar pertussis vaccine (DTaP) and should be administered in five doses (2, 4, 6, and 15-18 months of age and at 4-6 years of age). Parents should ensure their children receive the entire immunization series.

The primary objective in vaccinating adolescents with Tdap (tetanus, diphtheria, and pertussis) is to protect the vaccinated adolescent against pertussis while maintaining the standard of care for protections against tetanus and diphtheria. A secondary objective is to reduce the reservoir of pertussis within the U.S. population at large and potentially reduce the incidence of pertussis in other age groups, including infants who have the highest risk

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for complications.

Adolescents aged 11-18 years should receive a single dose of Tdap instead of other toxoid-containing vaccine (e.g., Td for booster immunization against tetanus, diphtheria, and pertussis if the recommended childhood DTaP/DTP vaccination series has been completed and the patient has not received Tdap or Td). The preferred age for Tdap vaccination is 11-12 years; routinely administering Tdap to young adolescents will reduce the morbidity associated with pertussis in adolescents. Adolescents aged 11-18 years who received Td, but not Tdap, are encouraged to receive a single dose of Tdap to provide protection against pertussis if the recommended childhood DTaP/DTP vaccination series has been completed. If the series was not completed or fully documented, the entire series should be administered, with preferably the first dose being Tdap if the patient is at least 10 years of age. The remaining two doses should be adult formulation TD. An interval of at least five years between Td and Tdap is encouraged to reduce the risk for local and systemic reactions after Tdap vaccination. However, an interval less than five years between Td and Tdap can be used.

Adults who are from 20 to 64 years of age should receive a single dose of Tdap to replace a single dose of Td for booster immunization against tetanus, diphtheria, and pertussis if they received the last dose of Td more than 10 years earlier. Adults who have or who anticipate having close contact with an infant less than 12 months of age (e.g., parents, grandparents less than 65 years of age, child-care providers or healthcare workers) should receive a single dose of Tdap. An interval of two years or more since the last dose of tetanus toxoid-containing vaccine is suggested, but a shorter interval can be used. Ideally, Tdap should be given at least one month before beginning close contact with the infant. Healthcare personnel who work in hospitals or ambulatory care settings and have direct patient contact should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap. Priority should be given to vaccination of healthcare personnel with direct contact with infants less than 12 months of age.

Handwashing 101

Hand Washing Vital to Maintaining Good Health

Melissa Luffy, RS, BA, Environmental Health Inspector Program Evaluator

Proper handwashing is the single most important step toward stopping the spread of infection. Because infectious diseases can be spread from person-to-person from contaminated hands, handwashing can be beneficial in helping to prevent the spread of organisms.

Although hands should be washed when they are visibly soiled and dirty, workers in healthcare facilities and food service environments should take special precautions to keep their hands clean at all times. Handwashing is essential in healthcare settings due to bodily secretions that expose the healthcare worker and patient to viruses, fungi, and bacteria. Handwashing should be conducted before and after using gloves and in between each medical procedure. According to The Association for Professionals in Infection Control and Epidemiology (APIC), handwashing causes a significant reduction in the carriage of potential pathogens on the hands, and in healthcare settings it can result in reductions in patient morbidity and mortality from infection.

The Centers for Disease Control and Prevention (CDC) estimates that poor personal hygiene contributes to approximately 50% of all foodborne illness outbreaks. Handwashing should be conducted before and after food preparation, especially after preparing raw meat, poultry, eggs, and seafood. It should also be performed after using the restroom, handling pets, coughing, sneezing, using tobacco, eating, drinking or touching something that may be contaminated.

According to the 2005 U.S. Food and Drug Administration's (FDA) Food Code, proper handwashing steps include:

- Wetting hands first with warm water (approximately 100° F).
- Applying soap to wet hands.

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- Lathering for 20 seconds with friction. Be sure to rub the back of hands, between fingers, and under nails and wrists.
- Scrubbing fingertips and nails vigorously.
- Rinsing off soap with water and drying hands thoroughly, being cautious not to recontaminate hands at the faucet or towel dispenser.

The above recommendation may also be used for healthcare workers, although certain healthcare facilities may require different steps, especially when working in an operating room.

Proper handwashing is vital to preventing the spread of disease and cross-contamination. Be sure to practice and promote proper handwashing daily.

Program's A Winner H.A.N.D.S. Down

Voluntary Program For First-Time Parents Provides Valuable Services

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Kentucky's Cabinet for Health and Family Services has a statewide home visitation program in place that assists first time parents who are found to be at-risk or overburdened. The Health Access Nurturing Development Services (H.A.N.D.S.) is a voluntary, intensive home visitation program designed to assist parents at critical developmental stages beginning prenatally and following a child until two years of age. The program goals for H.A.N.D.S. include positive pregnancy outcomes, optimal child growth and development, healthy, safe homes for children to reside in, and family self-sufficiency.

The H.A.N.D.S. program was initiated in 1998 and 1999 with a pilot project in 15 demonstration sites within county health departments in Kentucky. It was expanded to 47 programs in 2000 and 103 programs in 2001. The program became available in all 120 counties by 2003 and continues to maintain that status. In 2006, 10,967 families participated in the H.A.N.D.S. program, with over 135,000 home visits completed (60% by a paraprofessional).

The H.A.N.D.S. program utilizes a nationally recognized screening tool to identify at-risk women who are eligible for home visitation services in Kentucky. In 2006, there were a total of 7,649 referrals to the program, and 7,265 positive screens (95%). Examples of primary risk factors identified on positive screens include inadequate/no income source, single/separated/divorced status, and education under 12 years.

A web-based reporting system used by H.A.N.D.S. captures quantitative information such as program referrals, assessments, and home visits. Family risk factors are captured on the program referral screen and further analysis is given through a formal assessment completed by a professional nurse or social worker. The web-based system also has the capacity to measure qualitative information such as pre- and post-scores in regards to home safety and contains a child and family rating scale, which measures progress of the family environment, care giving, family interactions, and child well-being. Numerous reports can provide demographic information, length of time in the program, employment and education status, as well as referrals provided to outside agencies for additional services.

H.A.N.D.S. is comprised of many components that focus on health and social outcomes. In respect to the health component, developmental screening begins when a child is four months old and continues every two months until the child exits the program at age three. Children below normal screening scores are referred to the First Steps program within 24 hours. A childproofing checklist is conducted a minimum of two times to help educate parents of potential dangers and to prevent unnecessary injury to children. Professionals and paraprofessionals visiting the home also focus on Department for Public Health (DPH) mother and child programs such as breastfeeding, Women, Infants and Children (WIC), immunizations, smoking cessation, newborn screening, oral health, folic acid, and lead testing. The social component of the H.A.N.D.S. program uses a consistent parent-child curriculum throughout the state that encompasses the following modules: basic care, social and emotional development, cues and communication,

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KENTUCKY EPIDEMIOLOGIC NOTES & REPORTS
Printed With State Funds
by the
Commonwealth of Kentucky
Cabinet for Health and Family Services
Department for Public Health
275 East Main Street
Frankfort, Kentucky 40621

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physical and brain development, and play and stimulation. Growing Great KIDS (GGK) is a comprehensive curriculum that supports the development of nurturing and empathetic parent-child relationships from birth to three years of age. Although GGK is a separate program, the relationship with H.A.N.D.S. is based on the utilization of GGK curriculum. Likewise, a social emotional screening begins when a child is six months of age and continues every six months thereafter until the child exits the program. Progress toward family and child goals is documented on each weekly-monthly visit. Pre– and post-prevention assessments are used as a measure for stress reduction in the lives of the child's mother and father.

H.A.N.D.S. has received recognition for the scope of work performed in Kentucky from the Kentucky Public Health Association (Group Award, 2004) in recognition of valuable services in community health. Nationally, H.A.N.D.S. received the 2004 Jim Parker Award in recognition of outstanding collaboration between state and local health departments. This award is offered jointly by the Association of State and Territorial Health Officials (ASTHO), the National Association of County and City Health Officials (NACCHO), and the Association of State and Territorial Local Health Liaison Officials (ASTLHLO). H.A.N.D.S. continues to expand the quality of services provided to participants in the program. In September 2006, the H.A.N.D.S. program received a two-year grant award from the Health Resources and Services Administration (HRSA) to implement a screening and referral process for perinatal depression.

Further information regarding H.A.N.D.S. can be obtained at the H.A.N.D.S. Web site (http://chfs.ky.gov/dph/ach/hands.htm) or by contacting Brenda Chandler, H.A.N.D.S. program administrator, at (502) 564-3756.